



# Silver Line Gateway Alternatives Analysis

Public Meeting – May 1, 2013

# Study Overview

**GOAL:** Identify a recommended alternative for extending Silver Line service to Chelsea and East Boston that will enhance mobility and economic development potential

## Context:

- Transit improvements in corridor well aligned with MassDOT goals
- Leverage recent infrastructure investments
- Ongoing transportation funding debate
- Near-term constraints on Silver Line fleet

### Summary Schedule - 2013

| Task                          | Jan | Feb | March | April | May | June | July | Aug | Sept |
|-------------------------------|-----|-----|-------|-------|-----|------|------|-----|------|
| 1. Civic Engagement           |     |     | ★     |       | ★   | ★    |      |     | ★    |
| 2. Refinement of Alternatives |     |     |       |       |     |      |      |     |      |
| 3. Alternatives Analysis      |     |     |       |       |     |      |      |     |      |

★ Public Meeting

# Study Overview (continued)

## Study Area:

- About 5 miles long
- Diverse mix of dense residential and commercial land uses
- Many recent state investments
  - Silver Line Transitway
  - Williams Tunnel
  - Airport Station
  - Coughlin Bypass Road
  - Chelsea Street Bridge
  - Grand Junction purchase



# South Station and Seaport – Mirrors SL1



# East Boston – Uses Coughlin Bypass Road



# Chelsea – Busway Alternative



# Route Options – Eastern Avenue

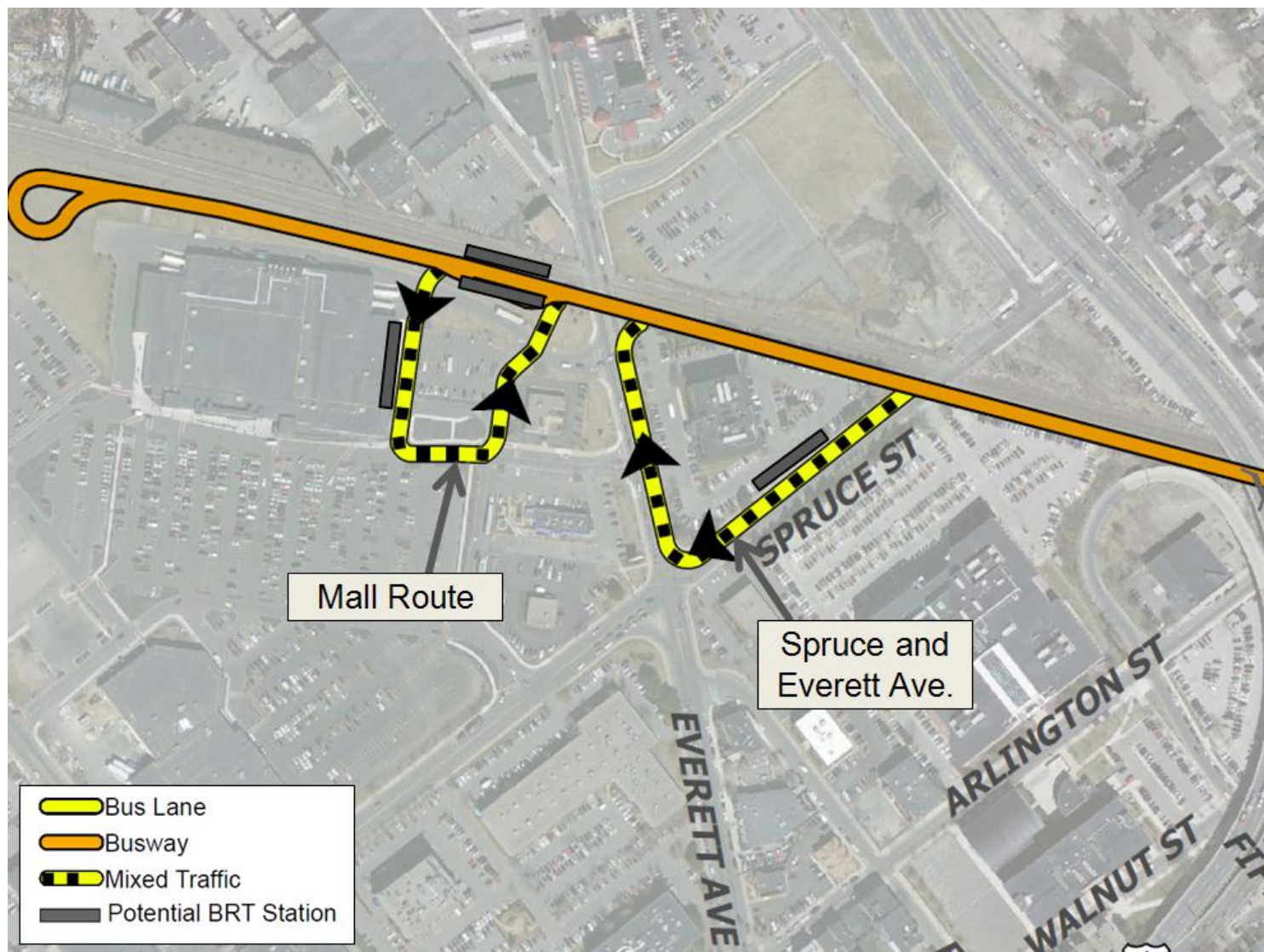


- Two options for accessing busway from Eastern Avenue:
  - Cottage Street
  - Bellingham Street
- Both increase vulnerability to traffic delay
- Makes station siting in this area more challenging

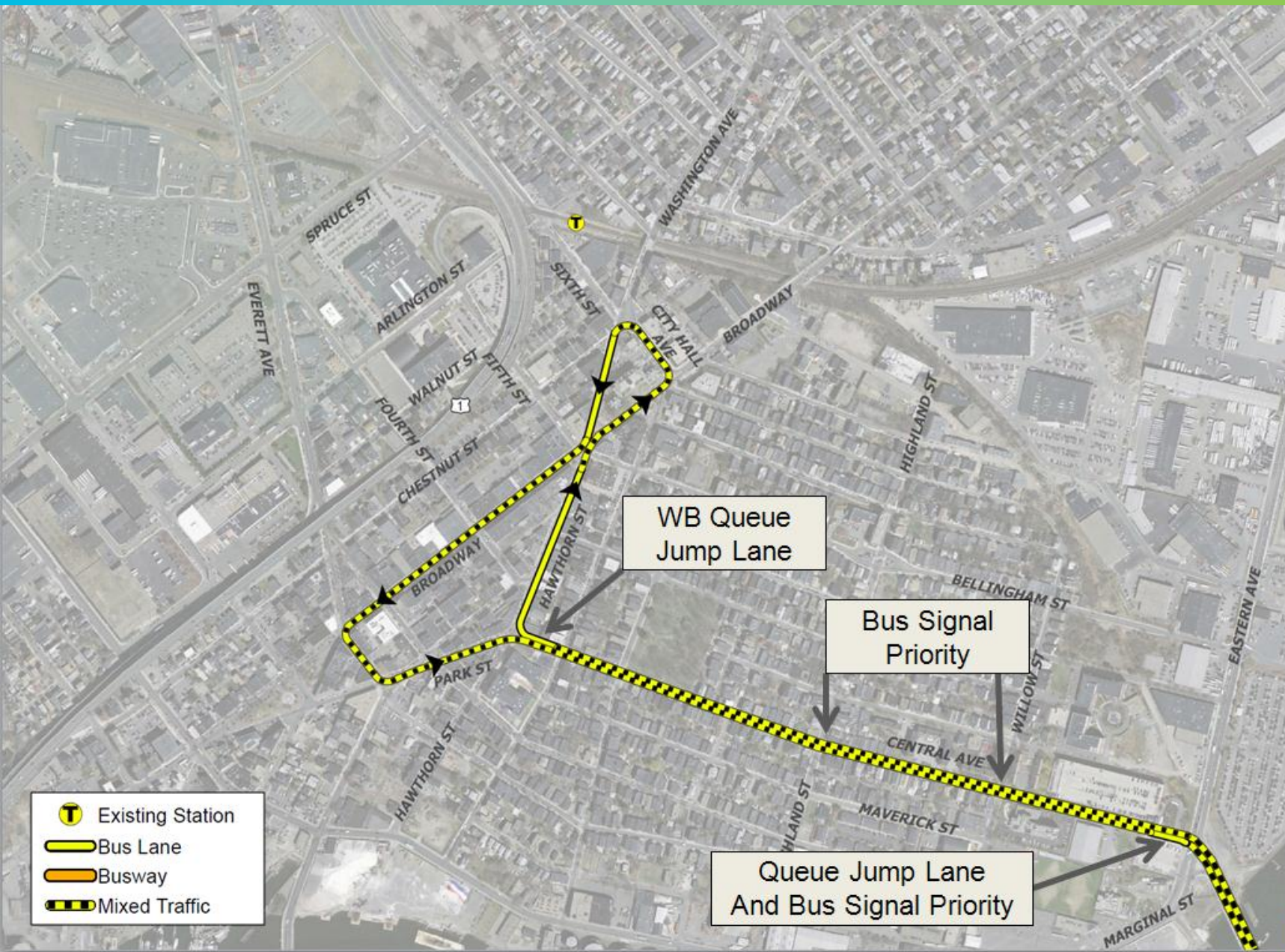
# Route Option – Downtown Chelsea



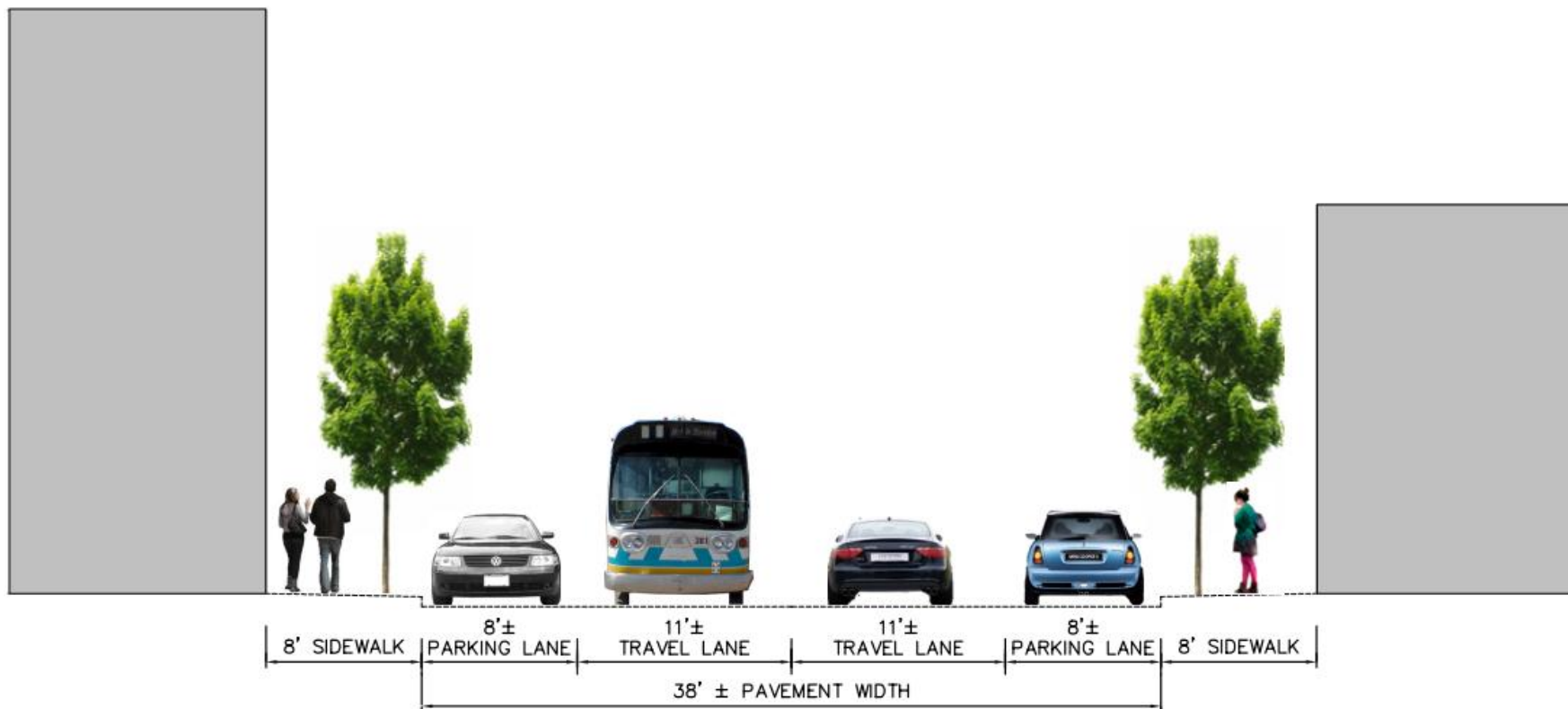
# Route Options – Mystic Mall Area



# Chelsea – On-Street Alternative

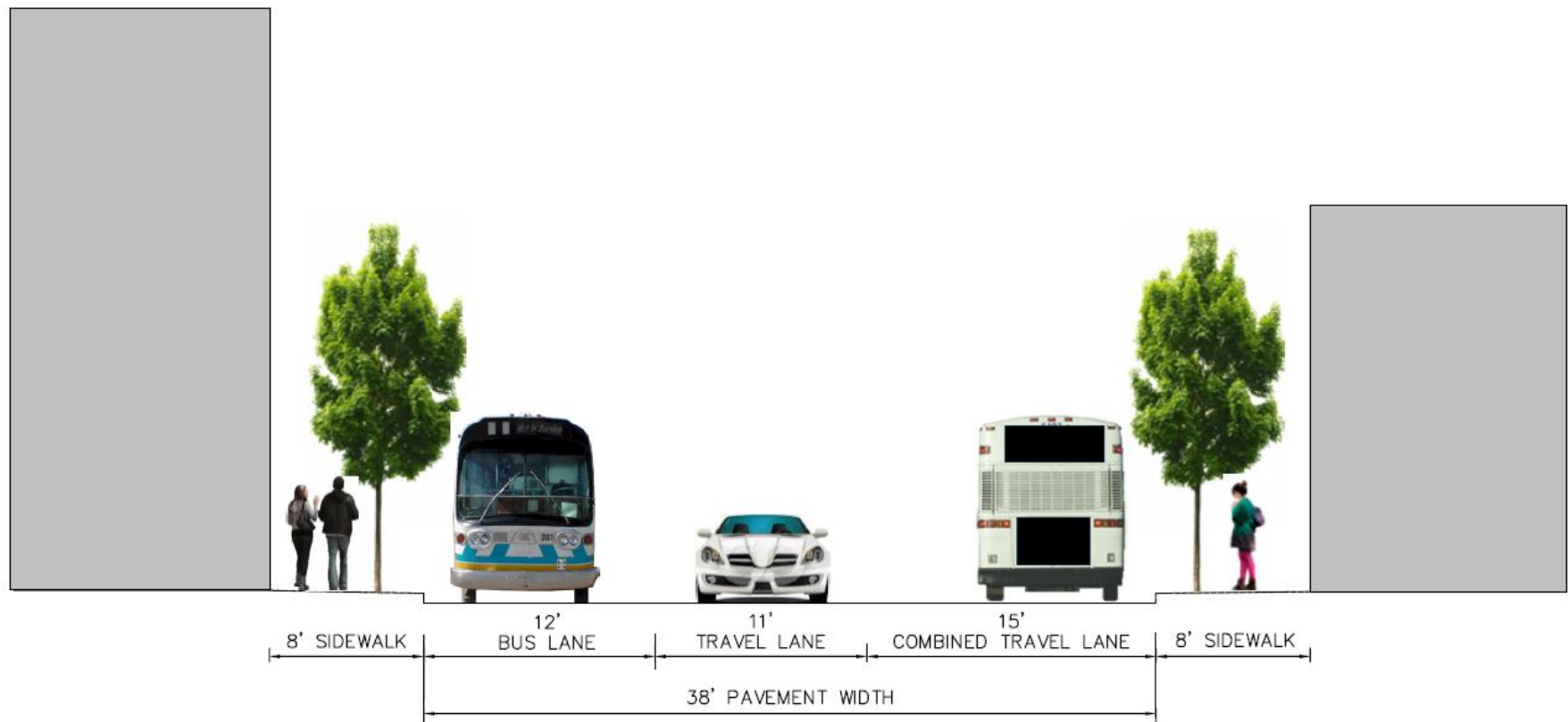


# Central Avenue – Existing Roadway



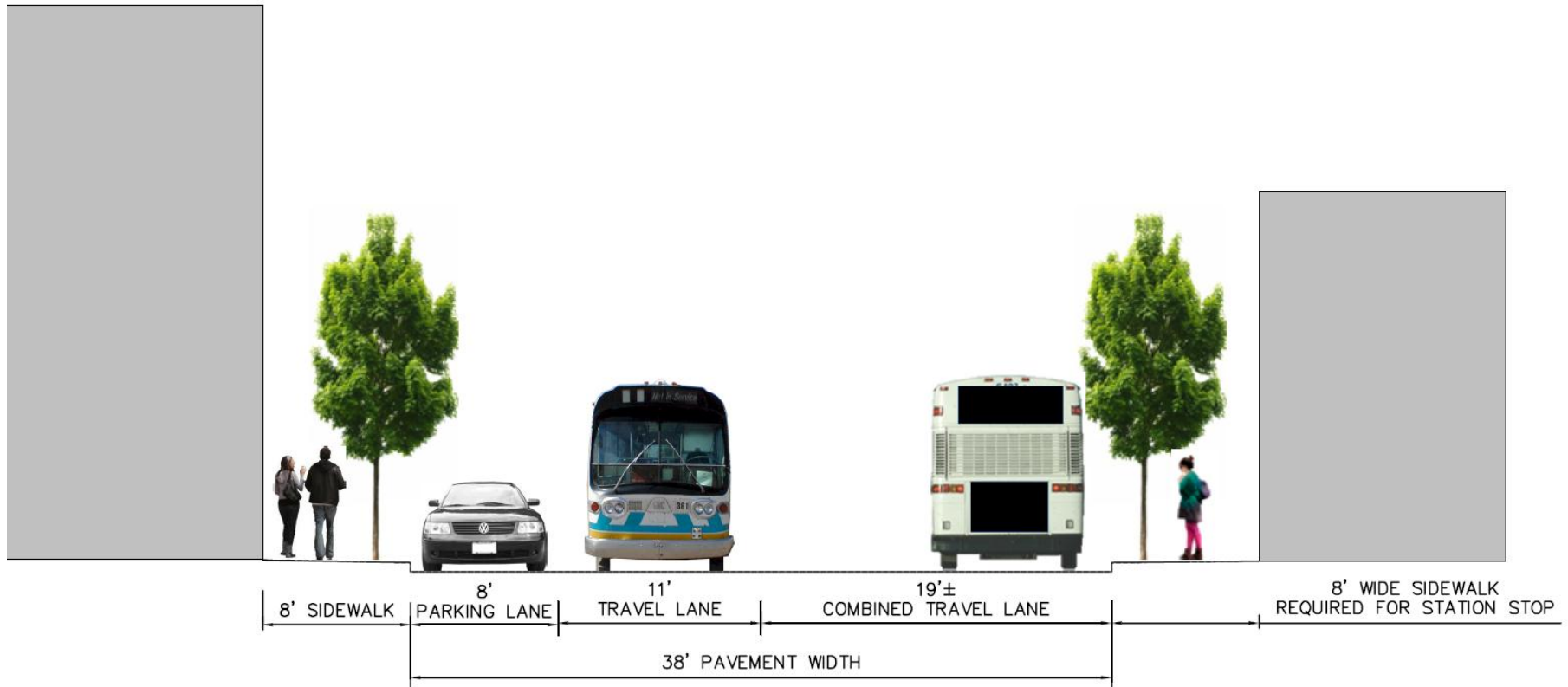
Central Avenue  
Existing Roadway

# Central Avenue – Bus Lane at Eastern Ave.



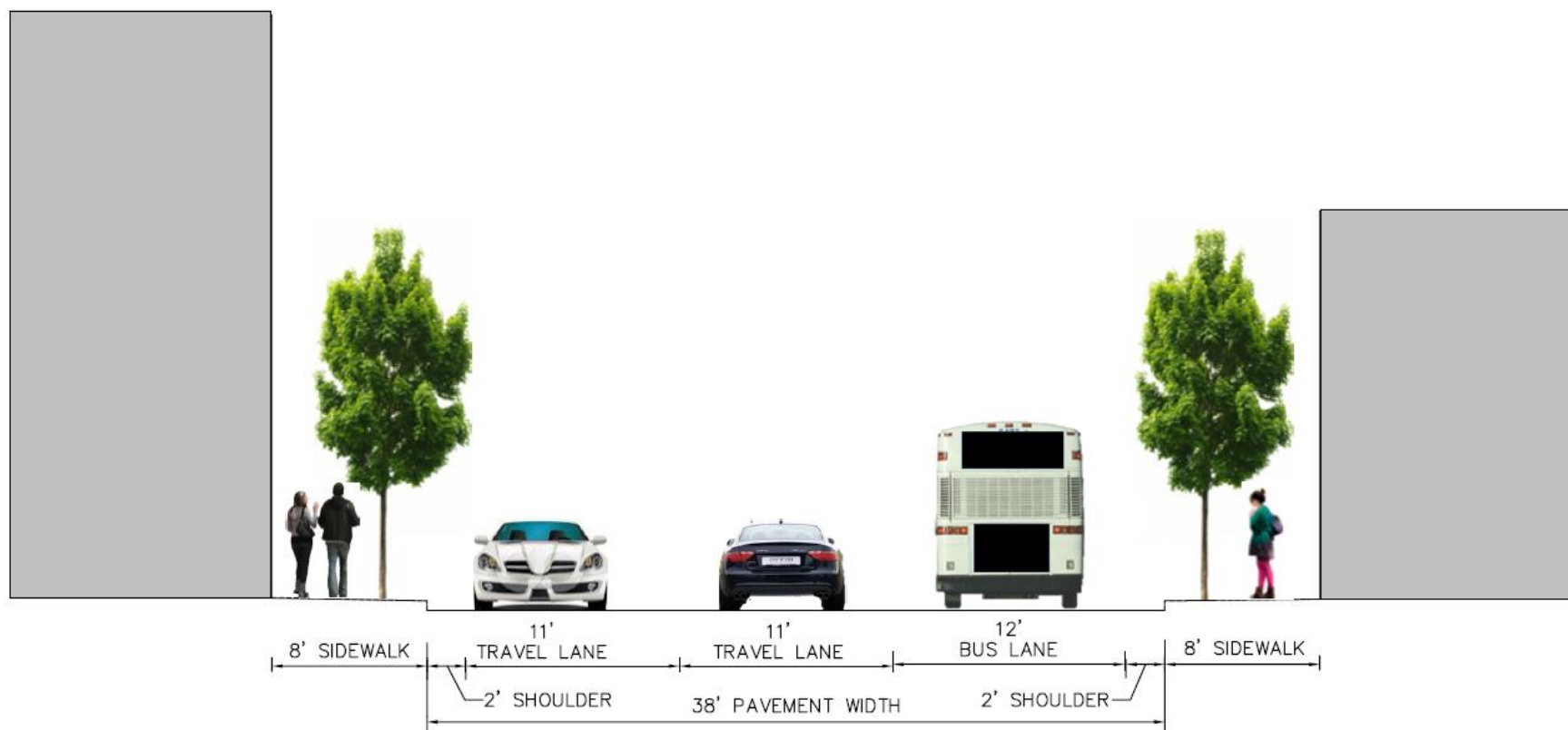
Central Avenue  
Proposed Roadway with Bus Lane Near Intersection of Eastern Avenue

# Central Avenue – At Highland Intersection



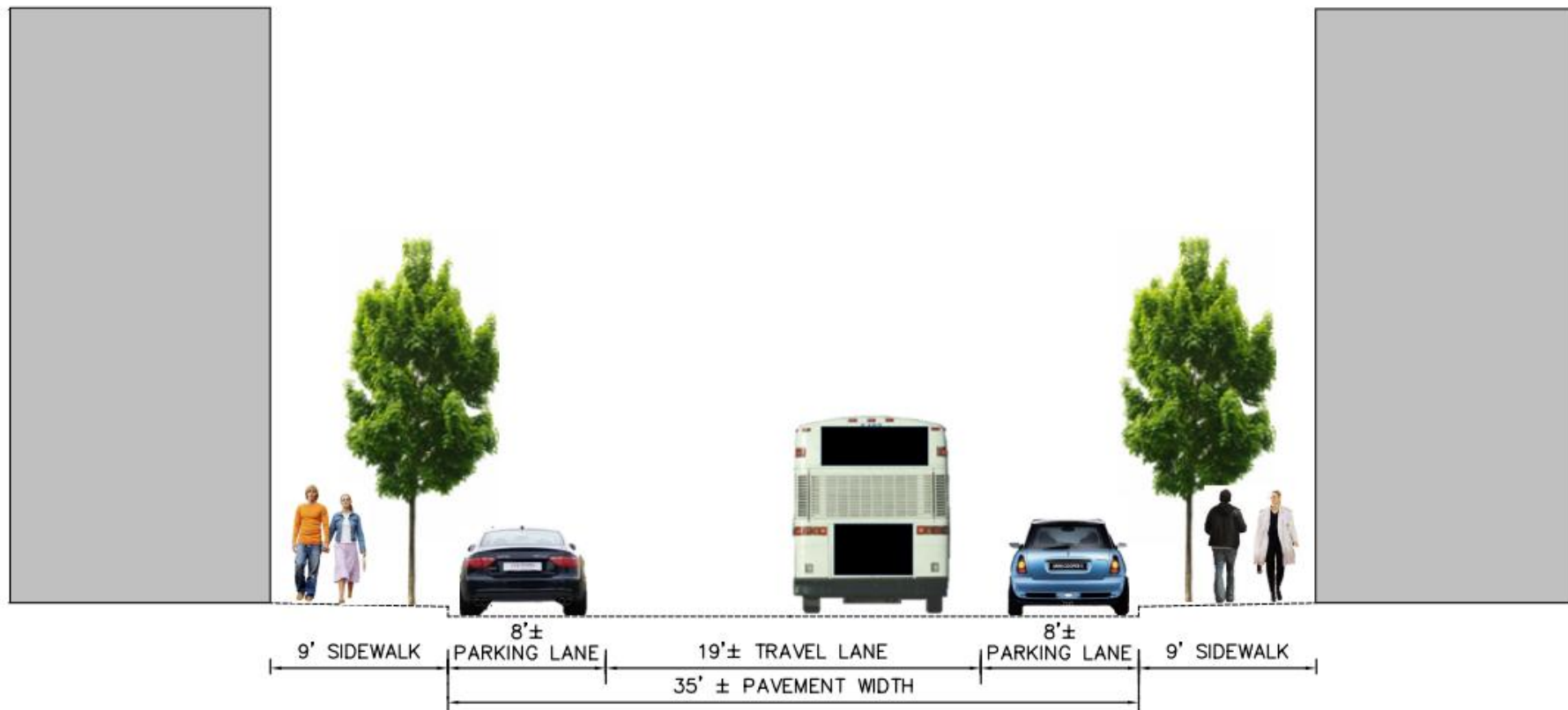
Central Avenue  
Proposed Roadway with Bus Lane Station Stop

# Central Avenue – Bus Lane at Hawthorn St.



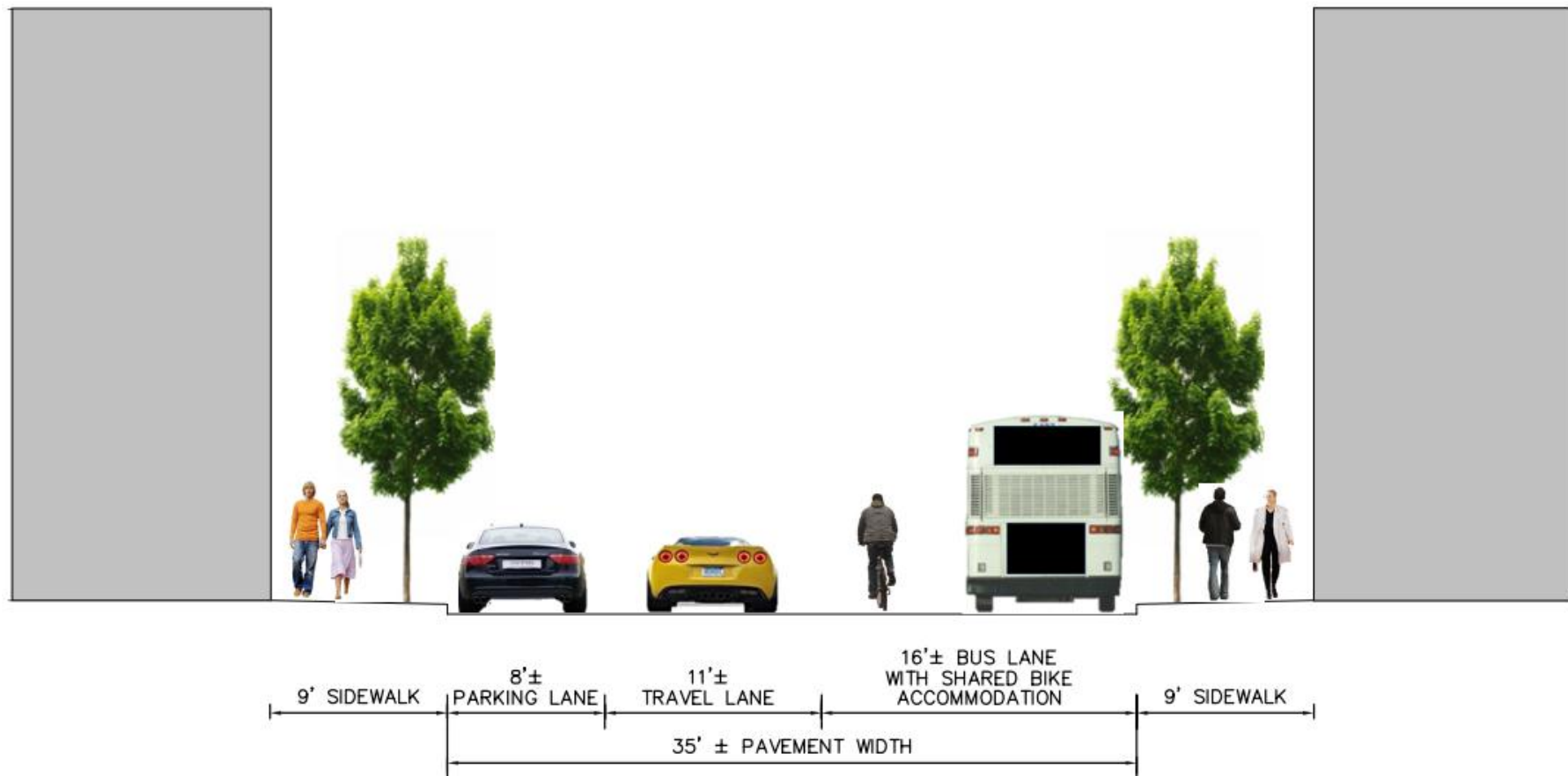
Central Avenue  
Proposed Roadway with WB Bus Lane Between Shurtleff and Hawthorn

# Hawthorn Street – Existing Roadway



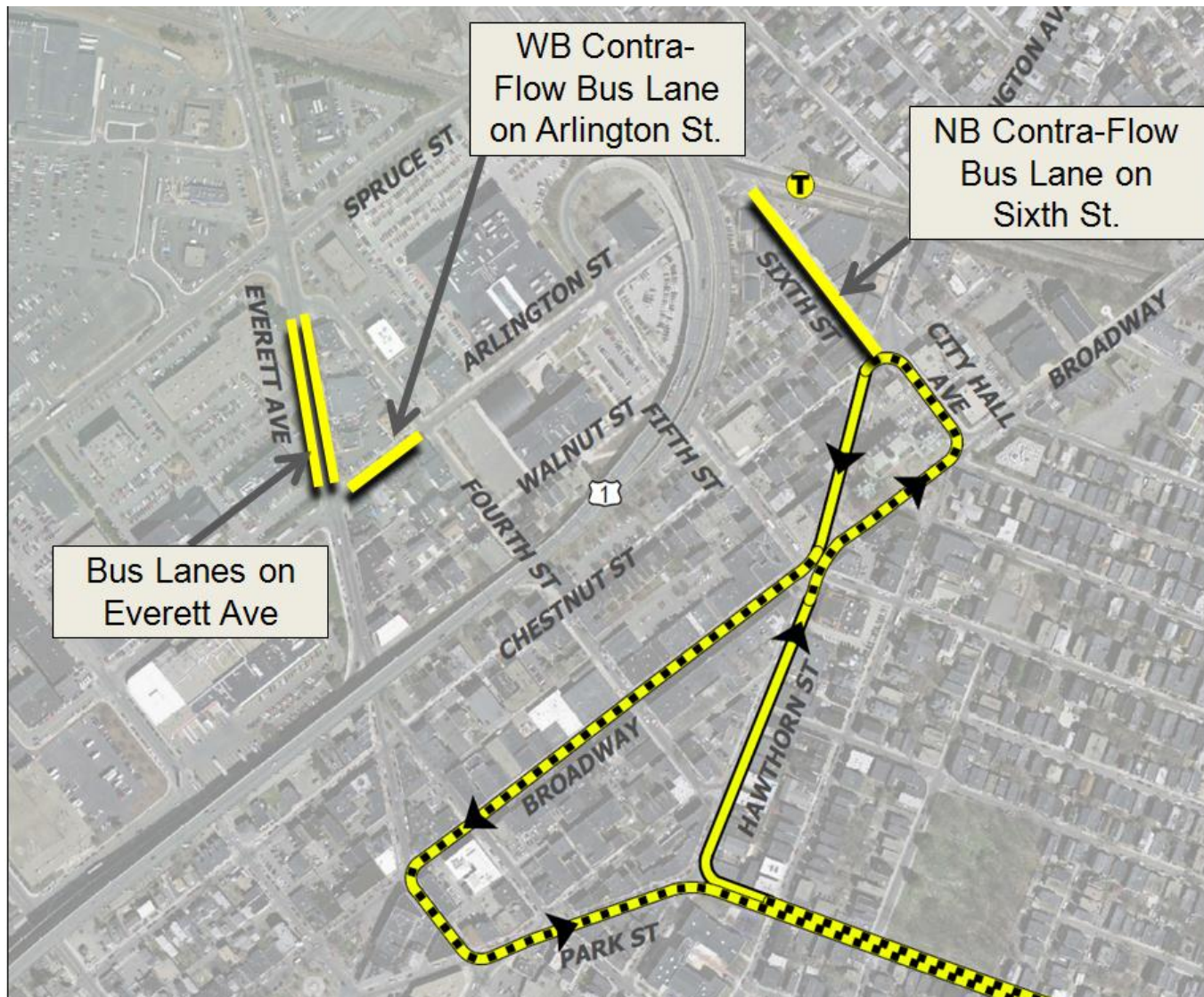
Hawthorn Street  
Existing Roadway

# Hawthorn Street – With Bus Lane Added



Hawthorn Street  
Proposed Roadway with Bus Lane

# Chelsea – On-Street Alternative



# Parking Impact – On-Street BRT

| Parking Impact Summary<br>On-Street Alternatives*               |       |           |                        |           |           |
|---|-------|-----------|------------------------|-----------|-----------|
| Street  | Side  | Unmetered | 20-Minute<br>Unmetered | Metered   | Total     |
| Central Avenue <sup>1</sup>                                     | Both  | 7         | 2                      | 13        | 22        |
| Everett Avenue<br>(Arlington to Fourth)                         | Both  | 22        | 0                      | 0         | 22        |
| Hawthorn Street (Park St. to<br>Bellingham St.)                 | East  | 0         | 0                      | 24        | 24        |
| Sixth Street <sup>2</sup><br>(Arlington St. to Washington Ave.) | North | 16        | 0                      | 0         | 16        |
| <b>TOTALS</b>   |       | <b>45</b> | <b>2</b>               | <b>37</b> | <b>84</b> |

## Notes:

\* The Central Avenue and Hawthorn Street impacts apply to all on-street alternatives. Impacts on other listed streets varies based on the specific on-street option being considered.

Citywide: Residential sticker parking only 12:00 AM – 5:00 PM; 7 days a week except Broadway, Eastern Avenue, Washington Avenue

(1) Upper Central Avenue District: residential sticker parking, only 12:00 AM – 6:00 PM 7 days a week from Highland Street to Willow Street.

(2) Commuter Rail District: residential sticker parking only between 8:00 AM and 6:00 PM Monday-Friday.

# Station Area Demographics – Chelsea 2010

| Alternative            | Number of Chelsea Stations | Station Area Demographics 2010 |                 |
|------------------------|----------------------------|--------------------------------|-----------------|
|                        |                            | Population                     | Employment      |
|                        |                            | 1/4 mile radius                | 1/4 mile radius |
| Busway Alternative     | 4                          | 10,505                         | 4,413           |
| Busway MGH Option      | 4                          | 11,183                         | 4,521           |
| Busway Chestnut Option | 3                          | 10,121                         | 2,697           |
| On-Street Alternative  | 3                          | 11,940                         | 2,955           |

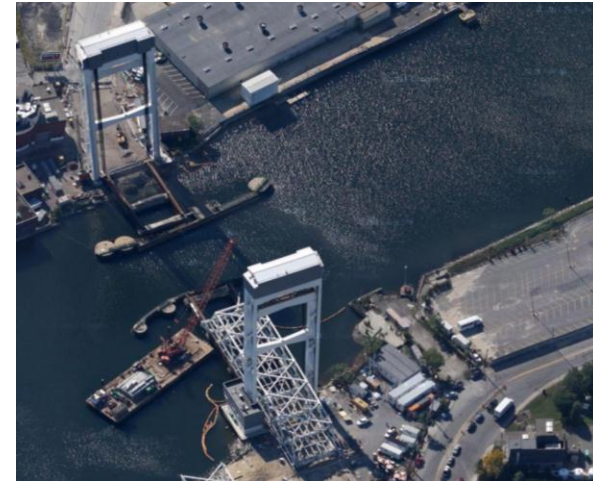
## Notes:

City of Chelsea 2010 total population = 37,555: City of Chelsea 2010 total employment=13,393

# Chelsea Creek Lift Bridge Openings

## Improve passenger information systems at Silver Line Gateway Stations

- Indicates opening of Chelsea Creek Lift Bridge
- Informs passengers alternative route is in use

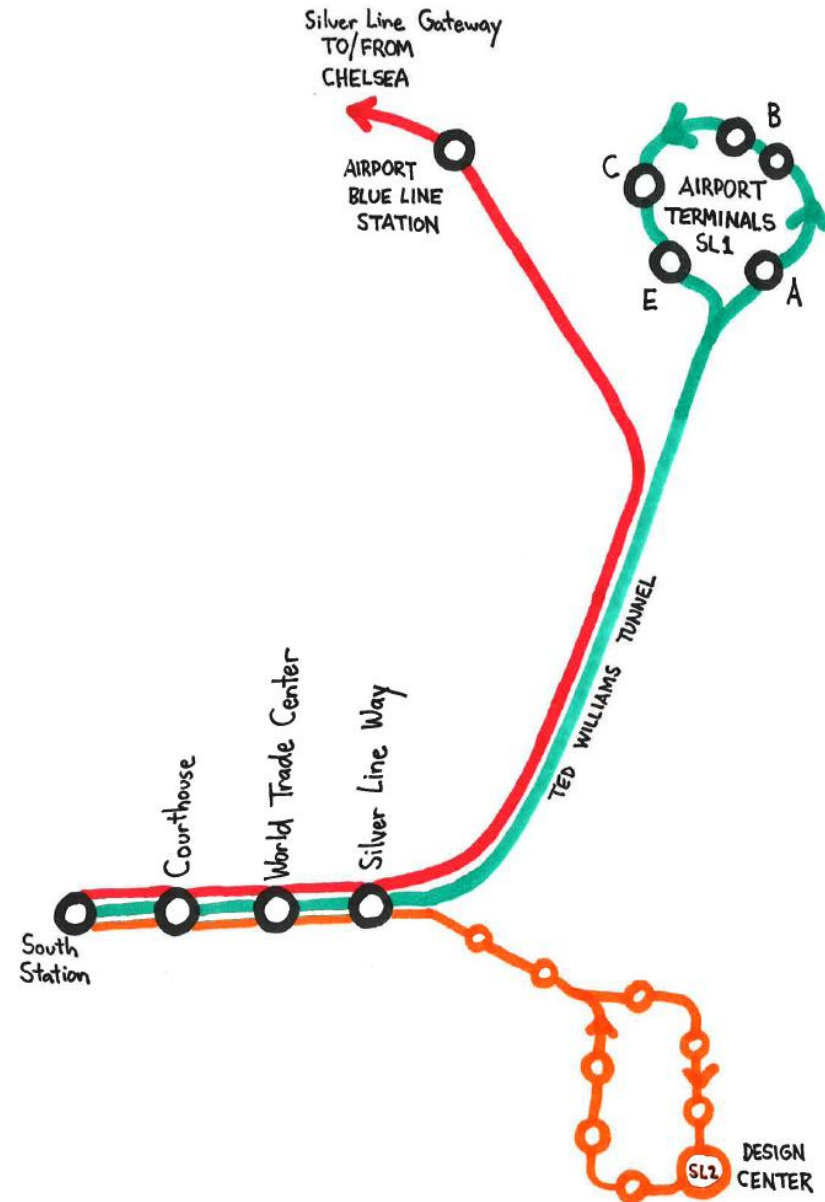


## Potential alternate routes when Chelsea Creek Lift Bridge is open:

- Boston “Short Turn” – Silver Line Gateway “short turns” at Airport Blue Line Station
- Chelsea Alternate Route – Silver Line Gateway operates via Route 1A to/from Airport Blue Line Station

# Potential Service Plans - Concept

- Silver Line Gateway route would be in addition to the existing SL1 and SL2 routes
- Existing Silver Line customers in the Seaport would experience no decrease in service levels
- Adds neighborhood stop at Airport Blue Line Station in East Boston
- Brings BRT service to Chelsea



# Potential Service Plans - Headways

New Silver Line Gateway service would operate similar frequencies and spans of service as Silver Line Waterfront services

- Spans of service from 5:00AM to 1:30AM seven days a week
- Potential frequency of service options include:

| Frequency of Service Plan Option 1 ( <i>Same as SL1, except Sunday</i> ) |                         |                                   |          |       |          |        |
|--|-------------------------|-----------------------------------|----------|-------|----------|--------|
| Route  | Origin - Destination    | Frequency of Service (In Minutes) |          |       |          |        |
|  |                         | Peak                              | Off-Peak | Night | Saturday | Sunday |
| Silver Line Gateway  | South Station – Chelsea | 10                                | 10       | 12    | 12       | 12     |

| Frequency of Service Plan Option 2 ( <i>More Frequent Peak Service</i> ) |                         |                                   |          |       |          |        |
|--|-------------------------|-----------------------------------|----------|-------|----------|--------|
| Route  | Origin - Destination    | Frequency of Service (In Minutes) |          |       |          |        |
|  |                         | Peak                              | Off-Peak | Night | Saturday | Sunday |
| Silver Line Gateway  | South Station – Chelsea | 7.5                               | 10       | 12    | 12       | 12     |

# Potential Service Plans – Key Issues

New Silver Line Gateway service plans would be similar for either the surface option or the busway option

- Allows for comparisons of potential ridership and other impacts to be made on a consistent basis

Other service plan considerations include:

- Vehicle size and type
- Consistency of bus service
- Intermodal connections
- Frequency of peak period service through the South Boston Piers Transitway tunnel

# Next Steps

- Continue civic engagement effort
- Finalize transit alternatives to address needs
- Begin analysis and comparison of alternatives
- Monitor transportation funding debate, and Silver Line fleet issues
- Provide preliminary analysis results at next public meeting in June



# THANK YOU

## QUESTIONS & ANSWERS

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